

## CLAIMS:

1. Modular device (1) for the detection and/or transmission of radiation, comprising - a carrier (10) with a mounting surface (12) and a set of first connecting elements (11); - a set of modules (20) for the detection and/or transmission of radiation, each of them comprising a second connecting element (21) that can be 5 coupled to one of said first connecting elements (11) to form a joint.
2. Modular device according to claim 1, characterized in that the joint is adapted to allow rotation on at least one axis and/or revolution around a point and/or a linear movement.
3. Modular device according to claim 1, characterized in that the modules (20) may contact each other when they are mounted on the carrier (10).
4. Modular device according to claim 1, characterized in that the 15 modules (20) comprise a base portion (22) that is larger in diameter than other parts of the module.
5. Modular device according to claim 1, characterized in that the second connecting elements are balls (21) or cylinders.
6. Modular device according to claim 1, characterized in that the first connecting elements are constituted by circular or rectangular holes (11) in the mounting surface (12) and that the second connecting elements (21) can be snapped into or through said holes (11) or fixed to the holes (11) by a locking element.

7. Modular device according to claim 6, characterized in that the second connecting elements (21) protrude from the backside of the carrier (10) when fixed to the holes (11).

5 8. Modular device according to claim 1, characterized in that the second connecting elements are flexible rods.

9. Modular device according to claim 1, characterized in that the mounting surface (12) is a section of a plane, a cylinder or a sphere.

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10. Modular device according to claim 1, characterized in that the modules (20) have a shape that allows the gapless filling of a plane, particularly the shape of a prism with a rectangular or hexagonal cross section.

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11. Modular device according to claim 1, characterized in that the modules (20) comprise a sensitive unit (24) on which an anti-scatter grid (25) is mounted.

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12. Modular device according to claim 1, characterized in that the first and second connecting elements (11, 21) are adapted to make at least one electrical contact when coupled together.

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13. Carrier (10) for a modular device (1) for the detection and/or transmission of radiation, comprising a mounting surface (12) and a set of first connecting elements (11) that can be coupled with second connecting elements (21) of modules (20) to form a joint.

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14. Module (20) for a modular device (1) for the detection and/or transmission of radiation, comprising a second connecting element (21) that can be coupled to a first connecting element (11) of a carrier (10) to form a joint.

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15. Imaging device, particularly a CT-system or a PET scanner, comprising an X-ray sensitive modular device (1) according to claim 1.

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